

Exhibit 8

1 UNITED STATES DISTRICT COURT
2

3 WESTERN DISTRICT OF TEXAS
4

5 MIDLAND/ODESSA DIVISION
6

7 VIRTAMOVE, CORP.,)
8 Plaintiff,)
9 vs.) Case No.
10 AMAZON.COM, INC.; AMAZON.COM) 7:24-CV-00030-DC-DTG
11 SERVICES LLC; and)
12 AMAZON WEB SERVICES, INC.,)
13 Defendants.)
14 _____)
15
16 VIRTUAL VIDEOCONFERENCE VIDEO-RECORDED DEPOSITION OF
17 PHIL ESTES
18
19
20
21
22
23 Stenographically Reported By:
24 Hanna Kim, CLR, CSR No. 13083
25 Job No. 6879934

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13	Virtual videoconference video-recorded	19	
14	deposition of PHIL ESTES, taken on behalf of the	20	
15	Plaintiff, remotely testifying from Charlottesville,	21	
16	Virginia, on Friday, August 23, 2024, before Hanna	22	
17	Kim, CLR, Certified Shorthand Reporter, No. 13083.	23	
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1	REMOTE APPEARANCES OF COUNSEL:	1	INDEX OF EXHIBITS
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3	FOR PLAINTIFF VIRTAMOVE, CORP.:	3	ESTES DEPOSITION EXHIBITS
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5	BY: QI (PETER) TONG, ESQ.	5	Exhibit 1 "DECLARATION OF PHIL ESTES IN 10
6	4925 Greenville Ave, Suite 200	6	SUPPORT OF DEFENDANTS' MOTION
7	Dallas, Texas 75206	7	TO DISMISS OR TRANSFER"; 5
8	310.826.7474	8	pages
9	ptong@raklaw.com	9	Exhibit 2 Printout of LinkedIn profile 53
10		10	of Phil Estes; 4 pages
			--oo--
11	FOR DEFENDANTS AMAZON.COM, INC.; AMAZON.COM SERVICES	11	
12	LLC; and AMAZON WEB SERVICES, INC.:	12	
13	KNOBBE, MARTENS, OLSON & BEAR	13	
14	BY: NATHAN D. REEVES, ESQ.	14	
15	925 4th Avenue, Suite 2500	15	
16	Seattle, Washington 98104	16	
17	206.405.2000	17	
18	nathan.reeves@knobbe.com	18	
19		19	
20	ALSO PRESENT:	20	
21	STEVEN TOGAMI, Videographer	21	
22		22	
23		23	
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<p>1 Remotely Testifying from Charlottesville, Virginia 2 Friday, August 23, 2024 3 1:31 p.m., Eastern Daylight Time 4 --00o-- 5 THE VIDEOGRAPHER: We are on the record at 01:31:23 6 1:31 p.m., on August 23rd, 2024. 7 Please note that this deposition is being 8 conducted virtually. 9 Quality of recording depends on the 10 quality of camera and internet connection of 01:31:55 11 participants. 12 What is seen from the witness and heard on 13 screen is what will be recorded. 14 Audio and video recording will continue to 15 take place unless all parties agree to go off the 01:32:02 16 record. 17 This is Media Unit Number 1 of the 18 video-recorded deposition of Phil Estes, taken by 19 counsel for the Plaintiff, in the matter of 20 VirtaMove Corporation versus Amazon.com, Inc., 01:32:20 21 et al., filed in the United States District Court, 22 for the Western District of Texas, Midland/Odessa 23 Division, Case Number 7:24-cv-00030-DC-DTG. 24 My name is Steven Togami, representing 25 Veritext Legal Solutions, and I am the videographer. 01:32:49</p> <p style="text-align: right;">Page 6</p>	<p>1 PHIL ESTES, 2 having been duly administered an oath, 3 remotely upon the stipulation of counsel, 4 was examined and testified as follows: 5 6 EXAMINATION 7 BY MR. TONG: 8 Q. Thank you. 9 Have you ever been deposed before, 10 Mr. Estes? 01:34:16 11 A. No, I have not. 12 Q. Okay. So I'm going to go over a few rules 13 with you. 14 Is that all right? 15 A. Yes. 01:34:22 16 Q. So in this proceeding I'm going to ask you 17 some questions, and you must answer them truthfully 18 under oath. 19 Your attorney may object from time to 20 time, but you are still required to answer the 01:34:30 21 question that I ask unless your attorney clearly and 22 directly instructs you not to answer. 23 Do you understand? 24 A. Yes. 25 Q. There's no judge here today, but this is a 01:34:41 Page 8</p>
<p>1 The court reporter is Hanna Kim, from the 2 firm Veritext Legal Solutions. 3 I am not related to any party in this 4 action, nor am I financially interested in the 5 outcome. 01:32:57 6 If there are any objections to proceeding, 7 please state them at the time of your appearance. 8 At this time, will counsel and all present 9 please state their appearances and affiliations for 10 the record, starting with the noticing party. 01:33:17 11 MR. TONG: This is Peter Tong from Russ 12 August & Kabat on behalf of VirtaMove Corporation. 13 MR. REEVES: Nathan Reeves from Knobbe, 14 Martens, Olson & Bear on behalf of Defendants and 15 the witness. 01:33:35 16 THE WITNESS: Phillip Estes from Amazon 17 Web Services. 18 /// 19 /// 20 /// 21 /// 22 /// 23 /// 24 /// 25 ///</p> <p style="text-align: right;">Page 7</p>	<p>1 legal proceeding just like you're testifying in 2 court, and you are under the same legal obligation 3 to tell the truth under the penalty of perjury. 4 Do you understand that? 5 A. Yes, I do. 01:34:57 6 Q. If you don't understand one of my 7 questions, you can feel free to say so and ask for 8 clarification. 9 What you say today can be used in court, 10 and you will have an opportunity to read over the 01:35:09 11 transcript to correct any transcription mistakes. 12 Do you understand that? 13 A. Yes. 14 Q. From time to time we can take a break if 15 you need to. And you can ask for a break at any 01:35:26 16 time, but we will not take a break while a question 17 is pending. 18 Do you understand that? 19 A. Yes. 20 Q. Okay. Are you on any drugs or medications 01:35:35 21 that may affect your memory or ability to tell the 22 truth today? 23 A. No, I am not. 24 Q. Okay. Is there any other reason why you 25 cannot provide truthful testimony today? 01:35:51 Page 9</p>

3 (Pages 6 - 9)

1 A. No.	1 corrections, but I have several places where I list
2 Q. Okay. I would like to at this time	2 my biography. And I'm still correcting all the
3 introduce Exhibit 1, which is -- which has been	3 places that still say I'm the chair of the technical
4 premarked. It is the "DECLARATION OF PHIL ESTES."	4 oversight board. So this is yet another one that
5 (Estes Deposition Exhibit 1 was marked for 01:36:13	5 I -- that I had missed. 01:38:58
6 identification electronically.)	6 Q. Sorry. The question wasn't really about
7 BY MR. TONG:	7 what you missed.
8 Q. Mr. Estes, could you please open up this	8 Do you have an estimate as to the number
9 document.	9 of hours that you had worked on this declaration;
10 A. I have it open. 01:36:18	10 for example, whether it was one or two or ten or a 01:39:10
11 Q. Okay. Do you recognize this as a true and	11 hundred hours?
12 correct copy of the declaration that you had	12 A. I would guess one or two hours.
13 submitted in this case?	13 Q. Okay. Did you write the first draft of
14 A. Yes, I do. And there is one correction	14 this declaration?
15 that I'd like to make either at this time or when we 01:36:34	15 MR. REEVES: Objection. Vague. 01:39:24
16 are discussing it.	16 THE WITNESS: No, I didn't draft every
17 Q. Sure.	17 word of this declaration.
18 What is that correction?	18 BY MR. TONG:
19 A. Paragraph 2 begins "I am also the Chair of	19 Q. Did you write the first draft of this
20 the Technical Oversight Board." 01:36:47	20 declaration? 01:39:35
21 Q. Mm-hmm.	21 MR. REEVES: Objection. Asked and
22 A. And I did not catch that when we first	22 answered.
23 went over this document, that -- I had been the	23 THE WITNESS: As I said, I didn't write
24 chair for many years, but I've -- I'm still a	24 every word of this document.
25 member, but I'm no longer the actual chair of the 01:37:0	125 BY MR. TONG: 01:39:45
Page 10	Page 12
1 oversight board.	1 Q. Okay. Did you review any documents when
2 Q. Okay. In what years were you the chair?	2 you were preparing this declaration?
3 A. I would have to look it up to be exact,	3 MR. REEVES: Objection. Vague.
4 but it was through last January, to the best of my	4 THE WITNESS: Could you restate that in --
5 recollection. 01:37:23	5 in the sense of what documents you would -- I would 01:40:11
6 Q. And as the chair of the technical	6 review to author this?
7 oversight board, what were your responsibilities?	7 BY MR. TONG:
8 A. Yeah, the oversight board for the open	8 Q. Sure.
9 container initiative simply exists to -- to make	9 In order to inform your knowledge about
10 sure that the operation of that foundation -- 01:37:44	10 the facts stated in this declaration, did you review 01:40:23
11 foundation's technical activities aren't stuck.	11 any documents?
12 So it's a board that only meets as	12 A. No.
13 necessary. And so while chair, I -- I chaired the	13 MR. REEVES: Objection. Vague.
14 meetings of that board that were required as	14 BY MR. TONG:
15 necessary. 01:38:05	15 Q. Did you do any searching or investigation 01:40:36
16 And I -- as I've mentioned, I'm still a	16 specifically to inform your knowledge of the facts
17 member, so I -- I still attend the meetings, but I'm	17 in this declaration?
18 no longer the chair.	18 A. No.
19 Q. Are those meetings held virtually?	19 MR. REEVES: Objection. Vague.
20 A. Yes, they are. 01:38:18	20 BY MR. TONG: 01:40:54
21 Q. Okay. How long did you spend preparing	21 Q. Sorry, could you repeat your answer?
22 and drafting this declaration?	22 A. No, I did not.
23 A. I -- I -- I -- I don't know an exact time.	23 Q. Okay. Other than attorneys, did you speak
24 But, you know, it's obviously quite a simple	24 to any people in order to inform your knowledge of
25 declaration. And I reviewed it, made necessary 01:38:39	25 the facts in this declaration? 01:41:11
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<p>1 A. No, I did not.</p> <p>2 Q. In order to investigate the facts and</p> <p>3 prepare this declaration, did you do any traveling</p> <p>4 to offices to perform any type of investigation?</p> <p>5 MR. REEVES: Objection. Vague. Lacks 01:41:36</p> <p>6 foundation. Assumes facts.</p> <p>7 THE WITNESS: No, I did not.</p> <p>8 BY MR. TONG:</p> <p>9 Q. Okay. Okay. All right.</p> <p>10 Could you provide me with your 01:41:50</p> <p>11 understanding of what is relevant in this case?</p> <p>12 MR. REEVES: Objection. Vague.</p> <p>13 THE WITNESS: If you could restate the</p> <p>14 question. I'm not sure I'm -- I even understand</p> <p>15 what you're trying -- 01:42:18</p> <p>16 BY MR. TONG:</p> <p>17 Q. So this -- this declaration contains</p> <p>18 several statements about Docker, BuildKits, and</p> <p>19 certain individuals.</p> <p>20 Why did you determine that they are 01:42:32</p> <p>21 relevant facts for putting in a declaration?</p> <p>22 MR. REEVES: Objection. Vague. Lacks</p> <p>23 foundation. Compound.</p> <p>24 THE WITNESS: I was asked about my</p> <p>25 knowledge of this area of technology given the roles 01:42:53</p>	<p>1 running containers on behalf of customers as tasks</p> <p>2 in the cloud.</p> <p>3 BY MR. TONG:</p> <p>4 Q. Okay. Is ECS sold or licensed as a</p> <p>5 standalone product? 01:44:40</p> <p>6 MR. REEVES: Objection. Compound.</p> <p>7 THE WITNESS: Not to my knowledge. If --</p> <p>8 if you mean "product" in the sense of a software</p> <p>9 product, that's not how cloud services are sold.</p> <p>10 BY MR. TONG: 01:44:58</p> <p>11 Q. It -- it would be more accurate to say</p> <p>12 that a customer with a subscription to AWS services</p> <p>13 would be able to access the ECS service; correct?</p> <p>14 MR. REEVES: Objection. Lacks foundation.</p> <p>15 THE WITNESS: Yes. 01:45:15</p> <p>16 BY MR. TONG:</p> <p>17 Q. And is there a name for the AWS service</p> <p>18 that a customer would need to be subscribed to?</p> <p>19 MR. REEVES: Objection. Vague.</p> <p>20 THE WITNESS: So that's probably pretty 01:45:39</p> <p>21 far afield of our discussion, but Amazon doesn't</p> <p>22 sell specific subscription services.</p> <p>23 It -- it -- Amazon's model, like many</p> <p>24 cloud providers, is one that allows essentially</p> <p>25 pay-as-you-go usage. So you -- you simply use ECS 01:45:59</p>
<p>Page 14</p> <p>1 that are actually stated in this declaration in</p> <p>2 response to action that was brought against my</p> <p>3 employer.</p> <p>4 BY MR. TONG:</p> <p>5 Q. Okay. So that's what I want to get at. 01:43:08</p> <p>6 What area of technology do you believe is</p> <p>7 relevant to this action?</p> <p>8 MR. REEVES: Objection. Vague. Calls for</p> <p>9 speculation.</p> <p>10 THE WITNESS: Yeah, to the best of my 01:43:20</p> <p>11 knowledge, this is simply about container</p> <p>12 technology.</p> <p>13 BY MR. TONG:</p> <p>14 Q. Okay. In Paragraph 3 of your declaration</p> <p>15 here, you use the letters "ECS." 01:43:46</p> <p>16 Could you tell us what "ECS" stands for?</p> <p>17 A. Yes.</p> <p>18 ECS stands for elastic container service.</p> <p>19 Q. And could you provide us with a very</p> <p>20 high-level overview of what ECS is? 01:43:59</p> <p>21 MR. REEVES: Objection. Vague.</p> <p>22 THE WITNESS: Yes. ECS, like many Amazon</p> <p>23 managed services, is one of Amazon's many services</p> <p>24 that allow our customers to make use of cloud</p> <p>25 technology. And ECS is specifically focused on 01:44:21</p>	<p>Page 16</p> <p>1 and you're charged for the usage that -- that you --</p> <p>2 that you consume.</p> <p>3 BY MR. TONG:</p> <p>4 Q. Okay. And Amazon would track the usage of</p> <p>5 ECS by individual customers; correct? 01:46:28</p> <p>6 MR. REEVES: Objection. Vague.</p> <p>7 THE WITNESS: Yes.</p> <p>8 BY MR. TONG:</p> <p>9 Q. Do you know if that tracking information</p> <p>10 is -- would be kept in some sort of database? 01:46:48</p> <p>11 A. Yeah, absolutely.</p> <p>12 Q. And ECS would be made available to</p> <p>13 customers throughout the United States; is that</p> <p>14 correct?</p> <p>15 MR. REEVES: Objection. Vague. 01:47:12</p> <p>16 THE WITNESS: Yes.</p> <p>17 BY MR. TONG:</p> <p>18 Q. Do you know if ECS is used by any</p> <p>19 customers in Texas?</p> <p>20 A. I don't have personal knowledge of ECS 01:47:31</p> <p>21 customers. So it's possible, but not something I</p> <p>22 could confirm for you directly.</p> <p>23 Q. Who would be the best person to ask that</p> <p>24 question to?</p> <p>25 MR. REEVES: Objection. Vague. Calls for 01:47:50</p>

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<p>1 speculation.</p> <p>2 THE WITNESS: ECS product leadership</p> <p>3 clearly would -- would be tracking their customers.</p> <p>4 BY MR. TONG:</p> <p>5 Q. Okay. And are you part of any type of 01:48:04</p> <p>6 team that works on ECS?</p> <p>7 MR. REEVES: Objection. Vague.</p> <p>8 THE WITNESS: No, I am not directly in the</p> <p>9 reporting chain of -- of the teams that work on ECS.</p> <p>10 BY MR. TONG: 01:48:30</p> <p>11 Q. What are the teams that work on ECS?</p> <p>12 A. Yeah, so that's somewhat of an open-ended</p> <p>13 question. There's -- there's many teams involved.</p> <p>14 You know, like any organization, there are</p> <p>15 operations teams. There's development teams. 01:48:54</p> <p>16 I'm not -- as -- as I said, I'm not --</p> <p>17 since I don't report to the -- the management of the</p> <p>18 ECS service, I -- I don't know the exact layout of</p> <p>19 their team.</p> <p>20 Q. Okay. Your title is a principal engineer 01:49:08</p> <p>21 at Amazon Web Services, Inc.; correct?</p> <p>22 A. Correct.</p> <p>23 Q. Okay. And your declaration says that your</p> <p>24 role at AWS "involves developing and maintaining the</p> <p>25 container technologies used by AWS, including the 01:49:31</p>	<p>1 Q. Do other members of the serverless</p> <p>2 containers in computes group also work in Virginia?</p> <p>3 A. No. I'm the only person in the</p> <p>4 organization located in Virginia.</p> <p>5 Q. Do any other members of that team work on 01:51:28</p> <p>6 the East Coast?</p> <p>7 A. Yes. There is a portion of the team in</p> <p>8 New York City.</p> <p>9 Q. Do you interact -- strike that.</p> <p>10 Is there a name for the engineering team 01:52:01</p> <p>11 that works on ECS?</p> <p>12 MR. REEVES: Objection. Vague. Lacks</p> <p>13 foundation.</p> <p>14 THE WITNESS: Other than the EC- --</p> <p>15 calling it the ECS team, I'm unaware of any other 01:52:23</p> <p>16 name they use for their organization.</p> <p>17 BY MR. TONG:</p> <p>18 Q. Do you interact with members of the ECS</p> <p>19 team?</p> <p>20 MR. REEVES: Objection. Vague. 01:52:32</p> <p>21 THE WITNESS: Yes, I do.</p> <p>22 BY MR. TONG:</p> <p>23 Q. Can you give me a few examples of ECS team</p> <p>24 members who you have interacted with recently?</p> <p>25 A. Sure. 01:52:52</p>
<p>Page 18</p> <p>1 Elastic Container Service." [As read]</p> <p>2 Right?</p> <p>3 A. That is correct.</p> <p>4 Q. Is there a part of an organizational group</p> <p>5 or team that you're on? 01:49:46</p> <p>6 A. Yes.</p> <p>7 MR. REEVES: Objection. Vague.</p> <p>8 BY MR. TONG:</p> <p>9 Q. What is the name of that group or team?</p> <p>10 A. My direct organi- -- organization is 01:49:53</p> <p>11 called serverless containers in compute.</p> <p>12 Q. How big is that team?</p> <p>13 A. I can only estimate. I don't know exact</p> <p>14 numbers. Between 100 and 200 people.</p> <p>15 Q. You -- you are located in Charlottesville, 01:50:20</p> <p>16 Virginia; correct?</p> <p>17 A. Yes, that is correct.</p> <p>18 Q. That's where you live and work?</p> <p>19 A. Yes. Correct.</p> <p>20 Q. Do you work remotely? 01:50:47</p> <p>21 A. Yes, I do.</p> <p>22 Q. Okay. Does Amazon have an office in</p> <p>23 Virginia?</p> <p>24 A. They have quite a few offices in Virginia,</p> <p>25 but not anywhere near Charlottesville. 01:51:05</p>	<p>Page 20</p> <p>1 Mats Lannér, is the director of the ECS</p> <p>2 organization. And since at one time I worked with</p> <p>3 him, I still interact with him somewhat regularly.</p> <p>4 Q. Can you give me the last three members of</p> <p>5 the ECS team who you interacted with? 01:53:14</p> <p>6 A. Yes. So as I said, Mats Lannér. And</p> <p>7 there are several principal engineers, and we meet,</p> <p>8 on average, a monthly basis across ECS and my</p> <p>9 organization.</p> <p>10 Trying to think of the best -- so it would 01:53:48</p> <p>11 be more than -- than three in the last, you know,</p> <p>12 few meetings. But Malcolm -- trying to think of his</p> <p>13 last name. He was a principal engineer on ECS.</p> <p>14 Although, he's been promoted so he owns more than</p> <p>15 just ECS. 01:54:09</p> <p>16 And Kiran Meduri is a principal engineer</p> <p>17 with ECS.</p> <p>18 Q. How do you spell Kiran Meduri?</p> <p>19 A. It is K-I-R-A-N, last name M-E-D-U-R-I.</p> <p>20 Q. Do you know if any members of the ECS team 01:54:36</p> <p>21 are on the East Coast?</p> <p>22 MR. REEVES: Objection. Vague.</p> <p>23 THE WITNESS: Yes, they have a New York or</p> <p>24 New Jersey located team.</p> <p>25 BY MR. TONG: 01:55:06</p>

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<p>1 Q. Have you -- are -- are you aware that this 2 lawsuit is a patent case? 3 A. Yes, I am. 4 Q. Okay. Have you read the patents that are 5 at issue in this case? 01:55:24 6 A. No, I have not. 7 Q. Have you read the infringement contentions 8 from this case? 9 A. No, I have not. 10 Q. So your declaration identifies a few 01:55:38 11 individuals including Tonis Tiigi. How do you 12 pronounce that last name? 13 A. No one I know knows how to pronounce his 14 last name. 15 Q. All right. 01:56:22 16 And also Derek McGowan. 17 Did I get that name right? 18 A. Yes. 19 Q. This is not intended to be a comprehensive 20 list of Docker engineers; correct? 01:56:41 21 A. That is correct. 22 Q. Do you have an estimate of how many Docker 23 engineers there are? 24 MR. REEVES: Objection. Vague. Calls for 25 speculation. 01:56:59</p>	<p>1 offices in San Francisco. 2 BY MR. TONG: 3 Q. When were you first aware of Docker, Inc.? 4 A. In the same time frame I just mentioned, 5 that -- somewhere in the 2013/2014 time frame. 01:59:07 6 Q. And -- and in -- in that time frame, you 7 said you had -- I guess you started out by just 8 going to their meetings; correct? 9 MR. REEVES: Objection. Vague to the 10 extent it mischaracterizes testimony. 01:59:40 11 THE WITNESS: Correct. I got involved in 12 the open-source project, which was essentially a 13 virtual group of contributors, including some Docker 14 employees. 15 BY MR. TONG: 02:00:00 16 Q. Did you eventually take on more -- take on 17 a role where you contributed more than just 18 attending meetings? 19 MR. REEVES: Objection. Vague. Lacks 20 foundation. 02:00:14 21 THE WITNESS: Yes, I became a code 22 contributor to the project. 23 BY MR. TONG: 24 Q. Around what year did you start 25 contributing code to the project? 02:00:25</p>
<p>Page 22</p> <p>1 THE WITNESS: No, I do not. 2 BY MR. TONG: 3 Q. And Docker is an entity that is 4 separate -- more -- strike that. 5 Docker, Inc. is an entity that is separate 01:57:13 6 from Amazon Web Services; correct? 7 MR. REEVES: Objection. Vague. Lacks 8 foundation. 9 THE WITNESS: Yes, that is correct. 10 BY MR. TONG: 01:57:31 11 Q. Have you been to the office of Docker, 12 Inc.? 13 A. They no longer have offices, but when they 14 did, yes. 15 Q. What brought you to the office of Docker, 01:57:46 16 Inc. back in the day? 17 MR. REEVES: Objection. Vague. 18 THE WITNESS: I got involved with the 19 Docker open-source project. I am going to guess 20 that it's sometime between 2013 and 2014. But 01:58:18 21 I'm -- I don't think that necessarily matters. 22 But at the time, various meetings of the 23 open source community. And sort of when I became a 24 maintainer in the open-source project, there were a 25 lot of invitations to go to meetings at their 01:58:42</p>	<p>Page 24</p> <p>1 A. I know for sure I was contributing code in 2 the year 2014. I don't remember at what point in 3 that year. 4 Q. Okay. Does Docker have a repository for 5 its code? 02:00:48 6 A. Yes, it does. 7 Q. And what is that repository? 8 A. It's a popular open source code repository 9 run by GitHub. 10 Q. Okay. For how many years did you 02:01:07 11 contribute code to Docker? 12 A. I contributed significantly through 2017. 13 Q. Do you know when Docker, Inc. first came 14 about? 15 MR. REEVES: Objection. Vague. 02:01:49 16 THE WITNESS: If you're talking about 17 their incorporation as Docker, Inc., I could guess, 18 but I -- I don't have a -- you know, it was in that 19 same period of time, but I don't have the -- a date 20 or the exact year. 02:02:06 21 BY MR. TONG: 22 Q. And that would be somewhere around the 23 2013/2014 time frame? 24 MR. REEVES: Objection. Asked and 25 answered. 02:02:18</p>

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<p>1 THE WITNESS: Yes.</p> <p>2 BY MR. TONG:</p> <p>3 Q. So out of the many engineers who work on</p> <p>4 Docker, why did you specifically name Tonis Tiigi</p> <p>5 and Derek McGowan in this declaration? 02:02:55</p> <p>6 A. I named those two because of their</p> <p>7 critical roles. For Tonis, the inventor essentially</p> <p>8 of BuildKit. And Derek has essentially been around</p> <p>9 through the entire history of Docker, and so, has --</p> <p>10 they both are -- are essentially significant leaders 02:03:25</p> <p>11 and contributors to the project.</p> <p>12 Q. Are there any other significant leaders</p> <p>13 and contributors to Docker?</p> <p>14 A. There are over the years. Many of them no</p> <p>15 longer work on the project or even in the container 02:03:49</p> <p>16 ecosystem. So they don't -- did not seem as</p> <p>17 relevant, given they've moved to other roles or</p> <p>18 stopped working on container technology.</p> <p>19 Q. Could you provide maybe four or five of</p> <p>20 their names? 02:04:09</p> <p>21 A. Yes. Michael Crosby, Jess Frazelle or</p> <p>22 Jessica Frazelle.</p> <p>23 Q. How do you spell Frazelle?</p> <p>24 A. Frazelle, F-R-A-Z-E-L-L-E.</p> <p>25 Tibor Vass. I believe it's V-A-S-S. 02:04:39</p>	<p>1 Q. What about the people who work on</p> <p>2 "containerd," are they scattered about different</p> <p>3 Amazon offices?</p> <p>4 MR. REEVES: Objection. Vague. Compound.</p> <p>5 THE WITNESS: "Containerd" is an 02:07:15</p> <p>6 open-source project. It is not managed by Amazon.</p> <p>7 So similar to Docker, anyone in the world can</p> <p>8 contribute to the project.</p> <p>9 BY MR. TONG:</p> <p>10 Q. Understood. Thank you. 02:07:29</p> <p>11 The container runtime team that you</p> <p>12 mentioned, where are they located?</p> <p>13 MR. REEVES: Objection. Compound.</p> <p>14 THE WITNESS: They're located in Seattle.</p> <p>15 BY MR. TONG: 02:07:48</p> <p>16 Q. Do they write code?</p> <p>17 A. Yes.</p> <p>18 Q. Do you know where Amazon keeps its code</p> <p>19 repositories?</p> <p>20 MR. REEVES: Objection. Lacks foundation. 02:08:07</p> <p>21 Vague.</p> <p>22 THE WITNESS: That probably is too broad</p> <p>23 of a question. That -- there's not a single answer</p> <p>24 for -- for that.</p> <p>25 BY MR. TONG: 02:08:23</p>
<p>1 And Victor Vieux, V-I-E-U-X.</p> <p>2 Q. Could you tell me about your day-to-day</p> <p>3 responsibilities?</p> <p>4 MR. REEVES: Objection. Vague.</p> <p>5 THE WITNESS: A principal engineering role 02:05:27</p> <p>6 at Amazon has a pretty varied -- I'm no longer a</p> <p>7 pure software developer, which I think would be</p> <p>8 easier to say I sit and write code all day. I -- if</p> <p>9 I were to summarize my intentional, sort of,</p> <p>10 day-to-day activities, it's providing leadership to 02:05:48</p> <p>11 a container runtime team who works here at Amazon,</p> <p>12 who helped contribute to "containerd," which was a</p> <p>13 project that came out of -- of Docker that I'm a</p> <p>14 maintainer of.</p> <p>15 BY MR. TONG: 02:06:10</p> <p>16 Q. Okay. The -- did you say that was</p> <p>17 Container V, as in Victor, or "containerd," as in</p> <p>18 dog?</p> <p>19 A. It is D as in dog.</p> <p>20 Q. The container runtime team that you 02:06:36</p> <p>21 mentioned, are those team members scattered across</p> <p>22 Amazon's offices?</p> <p>23 MR. REEVES: Objection. Vague.</p> <p>24 THE WITNESS: No, they are not.</p> <p>25 BY MR. TONG: 02:06:54</p>	<p>1 Q. For ECS-related code, could you describe</p> <p>2 how that code is managed?</p> <p>3 MR. REEVES: Objection. Vague. Lacks</p> <p>4 foundation.</p> <p>5 THE WITNESS: Amazon provides a single 02:08:42</p> <p>6 repository internally for all service team code.</p> <p>7 BY MR. TONG:</p> <p>8 Q. Does that repository have a name?</p> <p>9 A. Yes. I think it's currently called</p> <p>10 GitFarm, but it's normally referred to just as 02:09:05</p> <p>11 software.amazon.com.</p> <p>12 Q. Is it similar to like a generic GIT</p> <p>13 repository?</p> <p>14 MR. REEVES: Objection. Vague.</p> <p>15 THE WITNESS: As similar as it contains 02:09:30</p> <p>16 commits and branches, yes.</p> <p>17 BY MR. TONG:</p> <p>18 Q. And the repository would track the names</p> <p>19 of engineers who access and commit code; correct?</p> <p>20 A. Yes, that's correct. 02:09:56</p> <p>21 Q. And it would track versions of code that</p> <p>22 are checked in; correct?</p> <p>23 A. Yes. Correct.</p> <p>24 Q. Would there be -- strike that.</p> <p>25 Does the code repository use any type of 02:10:28</p>

<p>1 naming convention to track releases of ECS-related 2 code?</p> <p>3 A. I would not personally know that.</p> <p>4 Q. Did you ever work in a software writing 5 role at Amazon? 02:10:58</p> <p>6 MR. REEVES: Objection. Vague.</p> <p>7 THE WITNESS: Maybe you can clarify if 8 you're asking if I write code in my -- since joining 9 Amazon?</p> <p>10 BY MR. TONG: 02:11:19</p> <p>11 Q. Correct.</p> <p>12 A. Yes, but not for internal services like 13 ECS. I'm still -- because of my role externally, I 14 write code for "containerd" and extremely rarely 15 Docker. 02:11:40</p> <p>16 Q. Could you describe what "containerd" is?</p> <p>17 A. Yes.</p> <p>18 "Containerd" is essentially what was the 19 core of the Docker engine -- container runtime 20 engine broken out into a separate project in 27 -- 02:12:04 21 late 2016 and donated to the Cloud Native Computing 22 Foundation in March of 2017.</p> <p>23 Q. Okay. I want to take a look at Paragraph 24 3 of your declaration, which says that you're 25 "familiar with the design and development of ECS, 02:12:29</p>	<p>1 installing them physically to having a technology 2 called virtualization or virtual machines. And 3 containers are a progression in that history that 4 are a simpler form of packaging and deploying 5 software onto servers. 02:14:43</p> <p>6 BY MR. TONG:</p> <p>7 Q. And keeping the same audience in mind, 8 could you explain what images are and how they are 9 created?</p> <p>10 MR. REEVES: Objection. Vague. 02:15:06</p> <p>11 THE WITNESS: Sure. So container images 12 are how a software developer assembles a set of 13 configuration files, binaries, libraries, into a 14 unit that can be shared with the server. And so, 15 there's usually a set of statements, we call it a 02:15:29 16 Docker file, which control the building of that 17 image. And then it's usually pushed to a -- a 18 registry. So think of a -- a website that contains 19 images and a [verbatim] image name.</p> <p>20 BY MR. TONG: 02:15:53</p> <p>21 Q. And same question for the last part of 22 that first sentence in your declaration. So keeping 23 in mind the same audience, potentially a judge or 24 jury without a software background, could you 25 explain how containers are deployed and run? 02:16:09</p>
<p>Page 30</p> <p>1 including how containers are created from images, 2 how images are created, and how containers are 3 deployed and run."</p> <p>4 Could you elaborate a little bit more on 5 how containers are created from images? 02:12:45</p> <p>6 MR. REEVES: Objection. Vague.</p> <p>7 THE WITNESS: That's a fairly complicated 8 topic. I mean, I have lots of talks on YouTube that 9 you can watch.</p> <p>10 But it essentially -- if you're talking 02:13:07 11 about the mechanism of how images turn into a 12 running process, that's what container runtimes do.</p> <p>13 That's their actual job. And so, Docker and 14 "containerd" are two examples of runtimes which know 15 how to operate on images and turn them into running 02:13:28 16 containers.</p> <p>17 BY MR. TONG:</p> <p>18 Q. And could you explain what a container is, 19 doing your best to explain it to an audience who is 20 a judge or jury without a -- a software background? 02:13:50</p> <p>21 MR. REEVES: Objection. Vague.</p> <p>22 THE WITNESS: So in a nutshell, software 23 development has always needed a vehicle to package 24 and deploy their applications on servers, computers.</p> <p>25 In the history of computing, we've gone from 02:14:22</p>	<p>Page 31</p> <p>1 MR. REEVES: Objection. Vague.</p> <p>2 THE WITNESS: Yes.</p> <p>3 So the same analogy of software 4 applications being placed on a server, there are 5 various software components either controlled by 02:16:31 6 technology like ECS or like a very popular 7 open-source project called Kubernetes, which know 8 how to deploy that application. They're given 9 information on how many units of that software to 10 deploy across how many servers, and they pull those 02:16:52 11 images from the registry and then run them on that 12 server.</p> <p>13 BY MR. TONG:</p> <p>14 Q. Okay. The next sentence in your 15 declaration says, "These features are provided by 02:17:07 16 third-party software originally developed by Docker, 17 Inc."</p> <p>18 Do you see that?</p> <p>19 A. Yes.</p> <p>20 Q. So is it true then that there are -- 02:17:16 21 software developed by Docker, Inc. is used by Amazon 22 in conjunction with ECS?</p> <p>23 MR. REEVES: Objection. Vague. Lacks 24 foundation.</p> <p>25 THE WITNESS: Yes, that is correct. 02:17:38</p>

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<p>1 BY MR. TONG:</p> <p>2 Q. What software of Docker, Inc. is used by 3 Amazon?</p> <p>4 A. The Docker container engine, the container 5 runtime. 02:17:55</p> <p>6 Q. And is that something that is directly 7 available from Docker, Inc., or is it something that 8 Amazon and Docker worked on together for -- for a 9 more propri- -- proprietary version?</p> <p>10 MR. REEVES: Objection. Vague. Compound. 02:18:16</p> <p>11 THE WITNESS: It is the version of Docker 12 from the open-source project.</p> <p>13 BY MR. TONG:</p> <p>14 Q. And what is BuildKit?</p> <p>15 A. To understand what BuildKit is, similar to 02:18:36 16 how "containerd" came out of Docker and is now a 17 related component, the ability to build containers 18 was originally a piece of the Docker core engine 19 software.</p> <p>20 Tonis created BuildKit as a separate 02:19:03 21 open-source project that is then used by Docker, 22 similar to how "containerd" is also used by Docker, 23 to add -- to give its own life cycle and its ability 24 to add new features separate from the life cycle of 25 the Docker engine release cadence. 02:19:20</p>	<p>1 in order to -- to find BuildKit?</p> <p>2 A. Yes. You can find it -- the organization 3 is Moby, M-O-B-Y, and the project name is just 4 BuildKit.</p> <p>5 Q. And that would be the same version that 02:21:32 6 Amazon uses?</p> <p>7 MR. REEVES: Objection. Vague. Calls for 8 speculation.</p> <p>9 THE WITNESS: Yes.</p> <p>10 BY MR. TONG: 02:21:43</p> <p>11 Q. Do you know if Amazon keeps documentation 12 for how the ECS code operates?</p> <p>13 A. Yes. The same way that any project has 14 assorted documentation or design documents.</p> <p>15 Q. Okay. I -- I've been on several software 02:22:33 16 design teams, and some have been much better at 17 keeping documentation than others, I'm sure you can 18 imagine.</p> <p>19 In what ways does Amazon keep 20 documentation for its ECS code? Are there Wikis or 02:22:50 21 PDFs or PowerPoints? Like, how -- how is that kept?</p> <p>22 MR. REEVES: Objection. Vague. Compound.</p> <p>23 THE WITNESS: Most document- -- 24 documentation at Amazon is kept on a central Wiki.</p> <p>25 There are also -- shared document, editing 02:23:13</p>
<p>1 Q. The Docker container engine that you had 2 mentioned previously, where could I go and get a 3 copy of that?</p> <p>4 A. It is also available on GitHub as a 5 separate project. 02:19:43</p> <p>6 Q. Is there a particular name of a file or a 7 project that I should look for?</p> <p>8 A. So the -- GitHub has a notion of 9 organization and repositories. So "containerd" is 10 found on GitHub under the repository "containerd," 02:20:07 11 and the main "containerd" engine is the project 12 "containerd."</p> <p>13 So the "containerd"/"containerd" project 14 contains the source code for the container runtime 15 engine. 02:20:26</p> <p>16 Q. And that same code is used by Amazon?</p> <p>17 MR. REEVES: Objection. Vague. Calls for 18 speculation.</p> <p>19 THE WITNESS: Yes, it is.</p> <p>20 BY MR. TONG: 02:20:55</p> <p>21 Q. Is BuildKit something that I can -- that I 22 can also find on GitHub?</p> <p>23 A. Yes, it is.</p> <p>24 Q. And one more question, is there a 25 particular file or a directory that I need to access 02:21:13</p>	<p>1 platforms internally.</p> <p>2 BY MR. TONG:</p> <p>3 Q. What are those platforms called?</p> <p>4 A. Quip and Workdocs.</p> <p>5 Q. Sorry, that first word, was it "quick" 02:23:28 6 or -- could you spell it?</p> <p>7 A. Sure. It is Q-U-I-P.</p> <p>8 Q. Thank you.</p> <p>9 Aside from Quip and Workdocs, can you 10 think of any other repositories for code 02:23:46 11 documentation?</p> <p>12 A. No.</p> <p>13 MR. REEVES: Objection. Asked and 14 answered.</p> <p>15 THE WITNESS: No. 02:23:54</p> <p>16 BY MR. TONG:</p> <p>17 Q. Do you know what EC2 is?</p> <p>18 MR. REEVES: Objection. Lacks foundation.</p> <p>19 THE WITNESS: Yes.</p> <p>20 BY MR. TONG: 02:24:17</p> <p>21 Q. Would it be accurate to describe EC2 as 22 something that allows customers to deploy their own 23 version of ECS locally off the cloud?</p> <p>24 A. No. That would not be what EC2 is.</p> <p>25 Q. What is EC2, then? 02:24:42</p>

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<p>1 A. EC2 stands for Elastic Compute Cloud, and 2 it is the -- I would say the core service, original 3 service of -- of AWS that allows customers to 4 essentially rent a virtual machine, a virtual 5 computer in the cloud that is normally running Linux 02:25:08 6 but could run Windows.</p> <p>7 Q. All right.</p> <p>8 What's the -- what is the relationship 9 between ECS and EC2?</p> <p>10 MR. REEVES: Objection. Vague. Lacks 02:25:29 11 foundation.</p> <p>12 THE WITNESS: ECS, as I mentioned 13 originally, runs containers on behalf of customers, 14 and where those containers run is on EC2 instances 15 in the cloud. 02:25:46</p> <p>16 BY MR. TONG:</p> <p>17 Q. And EC2 would be a service that customers 18 are billed for usage; correct?</p> <p>19 MR. REEVES: Objection. Vague.</p> <p>20 THE WITNESS: Correct. 02:26:06</p> <p>21 BY MR. TONG:</p> <p>22 Q. Is EC2 sold or licensed to customers as a 23 standalone service?</p> <p>24 MR. REEVES: Objection. Vague. Compound.</p> <p>25 THE WITNESS: Yes, it -- in the same usage 02:26:23</p>	<p>1 THE WITNESS: Yes.</p> <p>2 BY MR. TONG:</p> <p>3 Q. It's not, for example, sold only in 4 California; correct?</p> <p>5 MR. REEVES: Objection. Asked and 02:28:18 6 answered. Calls for speculation.</p> <p>7 THE WITNESS: Correct.</p> <p>8 BY MR. TONG:</p> <p>9 Q. Do you have a sense of how popular the ECS 10 Anywhere product is? 02:28:40</p> <p>11 MR. REEVES: Objection. Vague. Calls for 12 speculation.</p> <p>13 THE WITNESS: No, I do not.</p> <p>14 BY MR. TONG:</p> <p>15 Q. Do you have a sense of how many customers 02:28:49 16 use ECS Anywhere?</p> <p>17 A. No, I do not.</p> <p>18 Q. Do you know who at Amazon I would need to 19 talk to in order to get a sense of the number of 20 customers that use ECS Anywhere? 02:29:09</p> <p>21 A. Yeah, that would -- would be the same ECS 22 product leadership.</p> <p>23 Q. Is there a person that you're referring to 24 as ECS product leadership?</p> <p>25 A. Yes. Mats Lannér, who I mentioned 02:29:30 Page 40</p>
<p>1 model that I mentioned before.</p> <p>2 BY MR. TONG:</p> <p>3 Q. But this would be under some sort of 4 umbrella access to AWS services; correct?</p> <p>5 MR. REEVES: Objection. Vague. 02:26:42</p> <p>6 THE WITNESS: In the sense that you need 7 to create an AWS account to access any service, yes.</p> <p>8 BY MR. TONG:</p> <p>9 Q. Okay. Are you familiar with ECS Anywhere?</p> <p>10 A. Yes. 02:27:09</p> <p>11 Q. And I think I misspoke earlier, but I -- 12 would I be correct in saying that EC Anywhere is the 13 service that allows customers to deploy their own 14 version of ECS locally off the cloud?</p> <p>15 A. Yes. 02:27:29</p> <p>16 Q. And would customers be billed for their 17 usage of ECS Anywhere in the same way?</p> <p>18 MR. REEVES: Objection. Vague.</p> <p>19 THE WITNESS: I am actually not informed 20 on the pricing model of the Anywhere products. 02:27:49</p> <p>21 BY MR. TONG:</p> <p>22 Q. ECS Anywhere, is -- is it made available 23 to people throughout the United States?</p> <p>24 MR. REEVES: Objection. Vague. Calls for 25 speculation. 02:28:07</p>	<p>1 earlier, is the director of that organization. I 2 say it generically because many project managers 3 would also be tracking customer data on a regular 4 basis.</p> <p>5 Q. Do you know if the ECS Anywhere team is a 02:30:07 6 separate team from the ECS team?</p> <p>7 A. I don't have direct knowledge of that.</p> <p>8 Q. What about the people who work on EC2, 9 would they be a -- a separate team from the ECS 10 team? 02:30:33</p> <p>11 A. Yes, they are.</p> <p>12 Q. Do you know where the EC2 team is located?</p> <p>13 MR. REEVES: Objection. Vague.</p> <p>14 THE WITNESS: They have many locations, 15 including around the globe, and I -- and I would not 02:30:52 16 be able to iterate all of them just because I don't 17 work with them.</p> <p>18 BY MR. TONG:</p> <p>19 Q. Thank you.</p> <p>20 But -- all right. 02:31:02</p> <p>21 MR. REEVES: Peter, would it be a good 22 time for a break?</p> <p>23 MR. TONG: We'll take -- let me just wrap 24 up these next few questions, and we'll take a break 25 within the next five minutes, if -- if that's okay 02:31:26</p>

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<p>1 with you.</p> <p>2 MR. REEVES: Sure.</p> <p>3 BY MR. TONG:</p> <p>4 Q. Do EC2 team members work across the United States? 02:31:37</p> <p>5 MR. REEVES: Objection. Vague. Asked and answered.</p> <p>6 THE WITNESS: My direct knowledge is mostly of leadership in the EC2 organization who are all in Seattle. But like I said, I can't iterate 02:31:53</p> <p>7 all the locations that may have an EC2 employee.</p> <p>8 MR. TONG: Now is a good time for a break.</p> <p>9 We could go off the record and take a ten-minute break.</p> <p>10 THE VIDEOGRAPHER: This marks the end of 02:32:10</p> <p>11 Media Number 1. Going off the record at 2:31 p.m.</p> <p>12 (Short recess taken.)</p> <p>13 THE VIDEOGRAPHER: This marks the beginning of Media Number 2. Going back on the record at 2:40 p.m. 02:41:20</p> <p>14 MR. TONG: Thank you.</p> <p>15 BY MR. TONG:</p> <p>16 Q. You're still under oath; do you understand that?</p> <p>17 A. Yes. 02:41:29</p>	<p>1 THE WITNESS: Yes.</p> <p>2 BY MR. TONG:</p> <p>3 Q. Do you know what APP2Container is?</p> <p>4 MR. REEVES: Objection.</p> <p>5 THE WITNESS: No. 02:43:03</p> <p>6 MR. REEVES: Outside the scope.</p> <p>7 THE WITNESS: No, I do not recognize that.</p> <p>8 BY MR. TONG:</p> <p>9 Q. And that would be A-P-P, the Number 2, and then the word "Container"? 02:43:12</p> <p>10 MR. REEVES: Objection. Asked and answered. Outside the scope.</p> <p>11 THE WITNESS: Are you asking if I know what that is still?</p> <p>12 BY MR. TONG: 02:43:27</p> <p>13 Q. Correct.</p> <p>14 Do you know what that is with the correction that it's the Number 2 and not like T-O?</p> <p>15 MR. REEVES: Same objections.</p> <p>16 THE WITNESS: No. 02:43:36</p> <p>17 BY MR. TONG:</p> <p>18 Q. Do you know what Kubernetes is?</p> <p>19 MR. REEVES: Objection. Outside the scope.</p> <p>20 THE WITNESS: Yes. 02:43:47</p>
<p>21 Page 42</p> <p>1 Q. Did you speak with your counsel during the break?</p> <p>2 A. Yes.</p> <p>3 Q. Did he refresh your recollection of any facts that we have discussed so far? 02:41:43</p> <p>4 A. No.</p> <p>5 Q. Do you know what the AW- -- let me start over.</p> <p>6 Do you know what the AWS Elastic Container Registry is? 02:42:00</p> <p>7 A. Yes, I do.</p> <p>8 Q. And could you explain it to a judge or a jury without a software background?</p> <p>9 MR. REEVES: Objection. Vague. Outside the scope. 02:42:13</p> <p>10 THE WITNESS: Yes. So Amazon's ECR is a container registry. So when software is packaged into containers, ECR is one place that customers could store those images or use in Amazon's cloud or elsewhere. 02:42:37</p> <p>11 BY MR. TONG:</p> <p>12 Q. And customers would be billed for their use of ECR; correct?</p> <p>13 MR. REEVES: Objection. Vague. Outside the scope. 02:42:50</p>	<p>1 BY MR. TONG:</p> <p>2 Q. Could you explain to a judge or jury what Kubernetes is?</p> <p>3 MR. REEVES: Objection. Vague. Outside the scope. 02:43:58</p> <p>4 THE WITNESS: Kubernetes is what's called a container orchestrator. It is also a very popular open-source project, also under the Cloud Native Computing Foundation consortium that is developed collaboratively and used by many companies to orchestrate how their containers run on servers. 02:44:19</p> <p>5 BY MR. TONG:</p> <p>6 Q. And does Amazon use Kubernetes to orchestrate how containers run on servers?</p> <p>7 MR. REEVES: Objection. Vague. Scope. 02:44:39</p> <p>8 THE WITNESS: Amazon offers a unique managed service called EKS, which does operate Kubernetes on behalf of our customers.</p> <p>9 BY MR. TONG:</p> <p>10 Q. Is that a custom version of Kubernetes? 02:44:55</p> <p>11 MR. REEVES: Objection. Vague. Scope.</p> <p>12 THE WITNESS: No, it is not.</p> <p>13 BY MR. TONG:</p> <p>14 Q. It -- is -- where could I get a copy of the version of Kubernetes that is used by Amazon? 02:45:15</p>

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<p>1 MR. REEVES: Objection. Vague. Scope. 2 Calls for speculation. 3 THE WITNESS: Amazon uses the same 4 open-source project that's available on GitHub. 5 BY MR. TONG: 02:45:35</p> <p>6 Q. Is there a file name or repository name 7 that I can find it under? 8 MR. REEVES: Same objections. 9 THE WITNESS: Yes. Similar to the other 10 projects, the organization name is Kubernetes, and 02:45:48 11 the project repository is Kubernetes. 12 BY MR. TONG: 13 Q. Is there a particular version of this that 14 is used by Amazon? 15 MR. REEVES: Objection. Vague. Calls for 02:46:06 16 speculation. Scope. 17 THE WITNESS: The Amazon EKS team makes 18 available each version, each commercial version of 19 Kubernetes that is released by the open-source 20 project. 02:46:30 21 BY MR. TONG: 22 Q. Same question for the Docker container 23 engine that we had talked about earlier that is 24 available on GitHub, is there a particular version 25 of that that's used by Amazon? 02:47:01</p>	<p>1 use, not these services. 2 BY MR. TONG: 3 Q. Paragraph 2 of your declaration mentions 4 the Moby Project. 5 Do you see that? 02:48:52 6 A. Yes. 7 Q. Are they at all affiliated with the 8 website hackermd.io [verbatim]? 9 MR. REEVES: Objection. Vague. Calls for 10 speculation. Outside the scope. 02:49:04 11 THE WITNESS: That doesn't sound correct 12 to me. 13 BY MR. TONG: 14 Q. Sorry. Are they at all affiliated with a 15 website mobyproject.org? 02:49:16 16 MR. REEVES: Same objections. 17 THE WITNESS: I believe so, but I would 18 have to visit that site to refresh my memory if 19 that's affiliated with the project. 20 BY MR. TONG: 02:49:35 21 Q. Sure. 22 Could you check that website right now, 23 mobyproject.org? 24 A. Sure. 25 Yes, that's correct. Yeah, that is -- I'm 02:49:55</p>
<p>1 MR. REEVES: Objection. Vague. Calls for 2 speculation to the extent it mischaracterizes 3 testimony. 4 THE WITNESS: So to -- to discuss versions 5 of software that Amazon uses, it's important to note 02:47:17 6 that Amazon creates its own Linux operating system 7 version called Amazon Linux, which is publicly 8 available to our customers and also used by 9 ourselves. And the Amazon Linux team packages 10 "containerd," Docker, et cetera, and chooses those 02:47:38 11 versions. 12 BY MR. TONG: 13 Q. And similar question for BuildKit, is 14 there a particular version of BuildKit that is used 15 by Amazon? 02:47:58 16 MR. REEVES: Objection. Vague. Calls for 17 speculation and to the extent it mischaracterizes 18 testimony. 19 THE WITNESS: So similar, BuildKit makes 20 open source releases, and those are packaged. 02:48:15 21 However, it's worth noting that Kubernetes does not 22 allow people to build containers and, therefore, has 23 no need of BuildKit. ECS also does not build 24 containers as a service. So, therefore, it doesn't 25 need BuildKit. BuildKit is something developers 02:48:35</p>	<p>1 not sure it's up to date, but that was created when 2 the Moby Project was formed. 3 Q. Okay. In Paragraph 2 of your declaration 4 it says that you "present on container technology at 5 industry and developer conferences." 02:50:34 6 Do you see that? 7 A. Yes, I do. 8 Q. What were the last five such conferences 9 that you presented at? 10 MR. REEVES: Objection. Vague. Compound. 02:50:46 11 THE WITNESS: I most recently presented at 12 FOSSY, which is F-O-S-S-Y. 13 Prior to that -- I'm trying to 14 disambiguate conferences I attend versus ones I 15 actually presented at. 02:51:24 16 Earlier in the year I presented at FOSDEM, 17 F-O-S-D-E-M, and State of OpenCon UK. 18 So that's three. I'm sure there's 19 something else in the spring, but if I go back to 20 last year, definitely KubeCon, CloudNativeCon and 02:52:00 21 Open Source Summit. 22 BY MR. TONG: 23 Q. Where were those conferences that you had 24 just mentioned? 25 MR. REEVES: Objection. Vague. Compound. 02:52:15</p>

13 (Pages 46 - 49)

1 THE WITNESS: FOSSY was in Portland,	1 MR. REEVES: Sure.
2 Oregon. FOSDEM is in Brussels, Belgium. State of	2 THE VIDEOGRAPHER: Going off the record at
3 OpenCon is London, UK. KubeCon last fall was in	3 2:55 p.m.
4 Chicago, and Open Source Summit was in Seattle.	4 (Short recess taken.)
5 BY MR. TONG: 02:52:59	5 THE VIDEOGRAPHER: Going back on the 03:02:24
6 Q. And your presentations there all related	6 record at 3:02 p.m.
7 somewhat to containers?	7 MR. TONG: Thank you.
8 A. That --	8 BY MR. TONG:
9 MR. REEVES: Objection. Vague.	9 Q. Do you have any knowledge of Sun
10 THE WITNESS: That is correct. 02:53:09	10 Microsystems' development of Solaris in 2002? 03:02:48
11 BY MR. TONG:	11 MR. REEVES: Objection. Outside the
12 Q. Let's see.	12 scope. Vague. Calls for speculation.
13 In Paragraph 4 of your declaration, you	13 THE WITNESS: No.
14 say that "Mr. McGowan is also part of the core team	14 BY MR. TONG:
15 that mentions [as read] 'containerd,' 02:53:44	15 Q. Okay. Do you have any knowledge related 03:03:11
16 C-O-N-T-A-I-N-E-R-D -- sorry. Let me try and spell	16 to Solaris's development of its zones technology
17 that again. C-O-N-T-A-I-N-E-R-D.	17 in -- around the 2002/2003 time frame?
18 Do you see that?	18 MR. REEVES: Objection. Outside the
19 A. Yes.	19 scope. Vague. Calls for speculation.
20 Q. Could you explain to a judge or jury who 02:54:06	20 THE WITNESS: I know about the technology 03:03:31
21 doesn't have a software background, what is	21 generally, but I have no idea about its development
22 "containerd"?	22 or specifics about the technology.
23 MR. REEVES: Objection. Vague. Asked and	23 BY MR. TONG:
24 answered.	24 Q. And you certainly were not involved in
25 THE WITNESS: Yeah, I answered that in -- 02:54:19	25 Sun's development of zones in the 2002/2003 time 03:03:43
Page 50	Page 52
1 in our prior se- -- segment. So I don't know if	1 frame; correct?
2 you're looking for a -- if you thought this was a	2 MR. REEVES: Objection. Vague. Outside
3 different project. This is the same project I	3 the scope.
4 mentioned.	4 THE WITNESS: That is correct.
5 BY MR. TONG: 02:54:35	5 MR. TONG: I'm going to introduce the 03:04:02
6 Q. I want to make sure we have different	6 final exhibit today -- what I expect to be our final
7 answers for a container, C-O-N-T-A-I-N-E-R, and this	7 exhibit.
8 specific thing spelled C-O-N-T-A-I-N-E-R-D.	8 Okay. It should be uploaded to the
9 This "containerd" spelling, is that	9 Exhibit Share site. Please let me know when you are
10 something different from a generic container? 02:55:01	10 able to access a copy of it. 03:04:56
11 MR. REEVES: Objection. Vague.	11 (Estes Deposition Exhibit 2 was marked for
12 THE WITNESS: Yes. This is the project I	12 identification electronically.)
13 mentioned that came out of the Docker engine project	13 THE WITNESS: Yes, I just opened it.
14 into its own open-source project when we talked	14 BY MR. TONG:
15 about its location on GitHub, where I am also one of 02:55:21	15 Q. Do you recognize this as a copy of your 03:05:06
16 the core maintainers of this project.	16 LinkedIn profile?
17 MR. REEVES: Hence, I believe it's	17 A. Yes.
18 pronounced "containerd," if that helps.	18 Q. In the first paragraph it says you're
19 MR. TONG: "Containerd." Okay.	19 "currently an OSS maintainer for the CNCF containerd
20 THE WITNESS: Yes. 02:55:42	20 project." [As read] 03:05:29
21 BY MR. TONG:	21 What do those acronyms stand for?
22 Q. That seems to clean up my confusion.	22 A. OSS --
23 MR. TONG: All right. Could we take a	23 MR. REEVES: Objection. Lacks foundation.
24 quick five-minute break? I am nearing the end of my	24 THE WITNESS: OSS is open-source software.
25 outline. 02:56:09	25 A common just shorthand for open-source software. 03:05:40
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<p>1 CNCF is the Cloud Native Computing 2 Foundation. 3 BY MR. TONG: 4 Q. Did you work on container technology at 5 IBM before you joined Amazon Web Services? 03:06:06 6 MR. REEVES: Objection. Vague. 7 THE WITNESS: Yes, I did. 8 BY MR. TONG: 9 Q. Could you generally describe your roles 10 and responsibilities related to container technology 03:06:24 11 at IBM? 12 MR. REEVES: Objection. Vague. 13 THE WITNESS: Yes. 14 I had a -- essentially the same role in 15 open source at both companies. So I was a 03:06:43 16 maintainer of Docker and then of "containerd" while 17 at IBM and continued to be so here at AWS. 18 BY MR. TONG: 19 Q. What IBM products did you work on? 20 MR. REEVES: Objection. Vague. Lacks 03:07:12 21 foundation. Outside the scope. 22 THE WITNESS: So very similar to my role 23 at Amazon, I'm not directly writing code or leading 24 specific software teams for the services of IBM's 25 cloud, and I also don't do that here. 03:07:38</p>	<p>1 technology, there were other employees also 2 contributing, not from my team, but others were. 3 BY MR. TONG: 4 Q. What's your best estimate of how many 5 other employees were contributing to container 03:09:56 6 technology at IBM on the East Coast? 7 MR. REEVES: Objection. Vague. Calls for 8 speculation. Outside the scope. 9 THE WITNESS: Yeah, I -- I -- picking a 10 number would be -- especially given it's been many 03:10:19 11 years, I'm -- I would represent it as a handful. 12 Many employees worked directly on the cloud 13 services, so contributing to open source was a -- a 14 much smaller group of people on the order of single 15 digits. 03:10:38 16 BY MR. TONG: 17 Q. Okay. On your LinkedIn, toward the bottom 18 of page 2, do you see where it says "STSM, IBM Cloud 19 Division"? [As read] 20 A. Yes, I do. 03:10:54 21 Q. What does "STSM" stand for? 22 A. It stands for senior technical staff 23 member. Others in the industry call it member of 24 technical staff. 25 Q. In the last sentence, underneath that 03:11:09</p>
<p>Page 54</p> <p>1 I work with the open-source technologies 2 that are used by, at the time IBM and now AWS, to 3 make cloud software, manage software services. But 4 I did not work on -- directly on the teams of any 5 IBM cloud service. 03:07:58 6 BY MR. TONG: 7 Q. Were you part of a team at IBM? 8 A. Yes. I was in the office of the CTO. 9 Q. Where was that office? 10 A. It was a title; the -- the office of the 03:08:28 11 CTO was a title. The team itself was virtual 12 worldwide. 13 Q. Did you work with any other IBM team 14 members on the East Coast? 15 MR. REEVES: Objection. Vague. 03:08:59 16 THE WITNESS: Yes. Our IBM research and 17 headquarters are both located in the state of New 18 York. 19 BY MR. TONG: 20 Q. Were there engineers there who also worked 03:09:18 21 on container-related technology? 22 MR. REEVES: Objection. Vague. Calls for 23 speculation. 24 THE WITNESS: Yes. If you mean 25 contributing to the open-source container 03:09:36</p>	<p>Page 56</p> <p>1 heading, do you see where it says, "Phil currently 2 works with IBM's Docker partnership, both in direct 3 Docker community participation as well as cross-IBM 4 Docker expertise for our clients and internal 5 product teams"? 03:11:38 6 A. Yes, I do. 7 Q. Can you give some of -- some examples of 8 the clients? 9 MR. REEVES: Objection. Vague. Outside 10 the scope. 03:11:55 11 THE WITNESS: I presented to -- to many 12 IBM customers. Some of them would come to my talks 13 at a conference, and then note that they were IBM 14 customers and were interested in our activity with 15 Docker. Verizon, Apple, Cisco. Yeah, I mean, 03:12:17 16 that's a few -- that's a few. 17 BY MR. TONG: 18 Q. And what are the names of the internal 19 product teams that are referenced in that paragraph? 20 MR. REEVES: Objection. Vague. Outside 03:12:42 21 the scope. 22 THE WITNESS: So IBM had a Kubernetes 23 service called IKS. That would be an internal team 24 that used container technology. There's another 25 service that's been renamed that was serverless 03:13:00</p>

15 (Pages 54 - 57)

<p>1 functions. Functions is a service that was using 2 container technology. So those were internal teams 3 at IBM cloud.</p> <p>4 BY MR. TONG:</p> <p>5 Q. What does "IKS" stand for? 03:13:17</p> <p>6 A. It stands for IBM Kubernetes Service.</p> <p>7 Q. Do you know where the IKS team was 8 located?</p> <p>9 MR. REEVES: Objection. Vague. Outside 10 the scope. 03:13:34</p> <p>11 THE WITNESS: Primarily in Raleigh, North 12 Carolina, at least their leaders that I interacted 13 with were in Raleigh; and also in Rochester, 14 Minnesota.</p> <p>15 BY MR. TONG: 03:13:53</p> <p>16 Q. And the serverless functions, was that 17 another team?</p> <p>18 A. Yes.</p> <p>19 Q. And do you know where they were located?</p> <p>20 MR. REEVES: Objection. Vague. Outside 03:14:09 21 the scope.</p> <p>22 THE WITNESS: Mostly in -- 23 (Interruption in audio/video.)</p> <p>24 THE COURT REPORTER: Could you repeat 25 that, please. 03:14:16</p>	<p>1 is one of the foremost knowledgeable experts, all 2 the way back to the beginning of the Docker era. So 3 he -- he would be well qualified to speak on any 4 relevant history or technology choices of Docker, 5 the project, or Docker the company that he works 03:16:10 6 for.</p> <p>7 BY MR. TONG:</p> <p>8 Q. Docker's code is kept in a [verbatim] 9 online repository; correct?</p> <p>10 MR. REEVES: Objection. Vague. Outside 03:16:25 11 the scope.</p> <p>12 THE WITNESS: Yes. Correct.</p> <p>13 BY MR. TONG:</p> <p>14 Q. And that repository tracks the dates as to 15 when code is checked in and updated; correct? 03:16:39</p> <p>16 MR. REEVES: Objection. Asked and 17 answered. Vague.</p> <p>18 THE WITNESS: Yes.</p> <p>19 BY MR. TONG:</p> <p>20 Q. If the development of Docker's code is 03:16:52 21 well-documented with check-in times, do you know 22 what Tonis Tiigi would have to add to this history?</p> <p>23 MR. REEVES: Objection. Vague. Lacks 24 foundation. Assumes facts. Outside the scope.</p> <p>25 Calls for speculation. 03:17:17</p>
<p>1 THE WITNESS: Yes. Mostly in Böblingen, 2 Germany.</p> <p>3 BY MR. TONG:</p> <p>4 Q. Okay. And I have two more very quick 5 lines of questions for you. 03:14:37</p> <p>6 The first is about Tonis Tiigi -- or 7 Tiigi. Do you have any idea of what Tonis Tiigi is 8 expected to testify about at trial?</p> <p>9 MR. REEVES: Objection. Vague. Lacks 10 foundation. Outside the scope. Calls for 03:15:07 11 speculation.</p> <p>12 THE WITNESS: I -- yeah.</p> <p>13 So I'm -- I'm going to say no because I'm 14 not quite sure -- I'm -- maybe you should restate 15 the question, but, no. 03:15:20</p> <p>16 BY MR. TONG:</p> <p>17 Q. Sure.</p> <p>18 I mean, if Amazon is contending that Tonis 19 Tiigi would be relevant at trial, what might he be 20 relevant to testify about? 03:15:32</p> <p>21 MR. REEVES: Objection. Vague. Lacks 22 foundation. Outside the scope. Calls for 23 speculation.</p> <p>24 THE WITNESS: So given the knowledge I 25 have that this relates to container technology, he 03:15:46</p>	<p>1 THE WITNESS: Since you mentioned working 2 on software teams, I think the easiest answer is 3 that knowing the date and time in which something is 4 checked in versus knowing the intricate details of 5 how it works or why it works the way it does or why 03:17:38 6 a change would be made is best left to people who 7 regularly interact with that software code.</p> <p>8 BY MR. TONG:</p> <p>9 Q. And do you believe that why code changes 10 is relevant to a legal issue in this case? 03:18:04</p> <p>11 MR. REEVES: Objection. Vague. Lacks 12 foundation. Outside the scope. Calls for 13 speculation. Calls for a legal conclusion.</p> <p>14 THE WITNESS: Yeah, since I don't know the 15 stated purposes or claims, then I -- I'm simply 03:18:28 16 stating that any kind of claim would have to be 17 dealt with someone who understands the code to even 18 know, you know, how to -- how to make a statement 19 about Docker's code or its history or -- or any 20 relevant details. 03:18:55</p> <p>21 BY MR. TONG:</p> <p>22 Q. And you don't have any legal education; do 23 you?</p> <p>24 A. No formal le- -- legal education, no.</p> <p>25 Q. Would it surprise you to learn that 03:19:08</p>

16 (Pages 58 - 61)

1 normally there are technical experts who explain
 2 topics such as the operation of source code in
 3 patent trials?
 4 MR. REEVES: Objection. Vague. Calls for
 5 speculation. Lacks foundation. 03:19:26
 6 THE WITNESS: No. I -- if -- definitely
 7 not surprised.
 8 BY MR. TONG:
 9 Q. Is there anything you believe that
 10 Mr. Tonis Tiigi would add to the facts beyond what a 03:19:45
 11 source code technical expert could explain?
 12 MR. REEVES: Objection. Vague. Lacks
 13 foundation. Calls for a legal conclusion. Asked
 14 and answered. Calls for speculation.
 15 THE WITNESS: Yeah, I -- I don't 03:20:12
 16 understand the purpose of the -- the line of
 17 questioning. And, you know, we can talk about
 18 Tonis' understanding and capabilities, and that's --
 19 that's all I'm representing is his knowledge of this
 20 specific code base. 03:20:30
 21 BY MR. TONG:
 22 Q. Okay.
 23 But as we sit here today, do you know a
 24 particular issue of patent infringement that he has
 25 relevant testimony about? 03:20:53

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1 We are off the record at 3:21 p.m., and
 2 this concludes today's testimony given by Phil
 3 Estes. The total number of media used was two and
 4 will be retained by Veritext Legal Solutions. Thank
 5 you. 03:22:17
 6 (Proceedings concluded, 3:21 p.m., EDT, on
 7 August 23, 2024.)
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1 MR. REEVES: Objection. Asked and
 2 answered. Vague. Calls for a legal conclusion.
 3 Calls for speculation.
 4 THE WITNESS: No, I do not.
 5 BY MR. TONG: 03:21:04
 6 Q. And as we sit here today, do you know a
 7 particular issue of patent invalidity that Mr. Tonis
 8 Tiigi has relevant testimony about at trial?
 9 MR. REEVES: Same objections.
 10 THE WITNESS: No. 03:21:17
 11 BY MR. TONG:
 12 Q. As we sit here today, do you know a
 13 relevant issue of patent damages that Mr. Tonis
 14 Tiigi has relevant testimony about at trial?
 15 MR. REEVES: Same objections. 03:21:30
 16 THE WITNESS: No.
 17 MR. TONG: All right.
 18 No further questions on direct.
 19 MR. REEVES: All right. We'll reserve the
 20 right to review and sign. 03:21:50
 21 MR. TONG: Okay. Thank you for your time,
 22 Mr. Estes.
 23 We can go off the record.
 24 THE WITNESS: Thank you.
 25 THE VIDEOGRAPHER: Hanna? Okay. 03:22:00

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1 JURAT
 2
 3 I, PHIL ESTES, do hereby certify under
 4 penalty of perjury that I have read the foregoing
 5 transcript of my deposition taken remotely via
 6 videoconference on Friday, August 23, 2024; that I
 7 have made such corrections as appear noted herein in
 8 ink, initialed by me; that my testimony as contained
 9 herein, as corrected, is true and correct.
 10
 11 Dated this _____ day of _____, 2024,
 12 at _____.
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 25 PHIL ESTES
 25 JOB NO. 6879934

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17 (Pages 62 - 65)

<p>1 CERTIFICATE OF REPORTER 2 I, Hanna Kim, a Certified Shorthand 3 Reporter, do hereby certify:</p> <p>4 That prior to being examined, the witness 5 in the foregoing proceedings was by me duly sworn to 6 testify to the truth, the whole truth, and nothing 7 but the truth;</p> <p>8 That said proceedings were taken before me 9 at the time and place therein set forth remotely via 10 videoconference and were taken down by me in 11 shorthand and thereafter transcribed into 12 typewriting under my direction and supervision;</p> <p>13 I further certify that I am neither 14 counsel for, nor related to, any party to said 15 proceedings, not in anywise interested in the 16 outcome thereof.</p> <p>17 Further, that if the foregoing pertains to 18 the original transcript of a deposition in a federal 19 case, before completion of the proceedings, review 20 of 21 was not requested. 22 st 23 24 25 Hanna Kim CLR, CSR No. 13083</p>	<p>1 <input type="checkbox"/> Federal R&S Requested (FRCP 30(e)(1)(B)) – Locked .PDF 2 Transcript - The witness should review the transcript and 3 make any necessary corrections on the errata pages included 4 below, notating the page and line number of the corrections. 5 The witness should then sign and date the errata and penalty 6 of perjury pages and return the completed pages to all 7 appearing counsel within the period of time determined at 8 the deposition or provided by the Federal Rules. 9 <input type="checkbox"/> Federal R&S Not Requested - Reading & Signature was not 10 requested before the completion of the deposition. 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25</p>
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<p>1 NATHAN D. REEVES 2 nathan.reeves@knobbe.com 3 September 4, 2024 4 RE: Virtamove, Corp. v. AMAZON.COM, INC., 5 8/23/2024, Phil Estes, (#6879934). 6 The above-referenced transcript has been 7 completed by Veritext Legal Solutions and 8 review of the transcript is being handled as follows: 9 <input type="checkbox"/> Per CA State Code (CCP 2025.520 (a)-(e)) – Contact Veritext 10 to schedule a time to review the original transcript at 11 a Veritext office. 12 <input type="checkbox"/> X Per CA State Code (CCP 2025.520 (a)-(e)) – Locked .PDF 13 Transcript - The witness should review the transcript and 14 make any necessary corrections on the errata pages included 15 below, notating the page and line number of the corrections. 16 The witness should then sign and date the errata and penalty 17 of perjury pages and return the completed pages to all 18 appearing counsel within the period of time determined at 19 the deposition or provided by the Code of Civil Procedure. 20 Contact Veritext when the sealed original is required. 21 <input type="checkbox"/> Waiving the CA Code of Civil Procedure per Stipulation of 22 Counsel - Original transcript to be released for signature 23 as determined at the deposition. 24 <input type="checkbox"/> Signature Waived – Reading & Signature was waived at the 25 time of the deposition.</p>	<p>1 Virtamove, Corp. v. AMAZON.COM, INC., 2 Phil Estes (#6879934) 3 E R R A T A S H E E T 4 PAGE ____ LINE ____ CHANGE _____ 5 _____ 6 REASON _____ 7 PAGE ____ LINE ____ CHANGE _____ 8 _____ 9 REASON _____ 10 PAGE ____ LINE ____ CHANGE _____ 11 _____ 12 REASON _____ 13 PAGE ____ LINE ____ CHANGE _____ 14 _____ 15 REASON _____ 16 PAGE ____ LINE ____ CHANGE _____ 17 _____ 18 REASON _____ 19 PAGE ____ LINE ____ CHANGE _____ 20 _____ 21 REASON _____ 22 _____ 23 _____ 24 (Phil Estes) Date</p>
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